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(raw transcript)

05 State of the Nation for People with Disabilities

>> Filippo Trevisan: Well, good afternoon, everybody, to those in the room and those following from wherever you are online. We'll move right into the next session which is titled the state of the nation for people with disabilities. My name is Filippo, associate dean in the school of communication here at American University. Also the deputy director of the institute on disability in public policy which is one of the cosponsors of today's and tomorrow's event.

Now, a lot of my work has to do with technology, people with disabilities, and in particular political participation at all levels, from the local level to the global level and in various countries. I'm very excited here today to be helping facilitate this discussion and conversation. And our two speakers today are going to be Greg Shatan and Manolo. I'm going to tell you a little bit more about them in just a second. But we had a real good conversation as we connected a few days ago to talk about today's panel and I think I see our conversation around the state of Internet access and accessibility for people with disabilities around the world today. Really revolve around three main themes that I think

are going to drive this conversation today. One of them is, of course, regulation and legislation. Another one is culture and another one is technology and, you know, there are various stakeholders of course involved in each one of those but I think everything we're going to hear from them and I'm looking forward to your questions as well really are going to sort of overlap with those three themes. Let me -- I'll give a brief introduction but let me just say that I think their perspectives I think are very complimentary and they'll provide, you know, a legal perspective as well as a user perspective, a teacher's perspective we'll hear a lot of that and we only have an hour so I don't want to take up too much time. We'll get right into our first speaker is going to be Manolo. Let me tell you a little bit about him before I hand it over to him. So Manolo is a blind person and he truly believes in social inclusion and has dedicated his life to promoting equal access to technology for all. He is an innovator, developer of apps, educational software and video games for blind students. Podcaster, researcher, and professor at the faculty of education at the university of Puerto Rico. He teaches assistive technology courses and has offered courses in accessible technology at the graduate level as a visiting professor at the university of Massachusetts Boston. He has also conducted digital accessibility workshops at Universities in Panama, Mexico, the anyone can republic, and Spain. Space center he joined a team there developing software for blind student to learn science. Eighty-two he is a member -- he was a member of the U.S. Federal Communications Commission office of engineer and technology advising group. Also promoter of creation of law 229 which guarantees accessibility of Web pages of the government agencies of Puerto Rico and offered assistance to Puerto Rico state elections commission as well as participated in the work team that developed the first talking ATM in Puerto Rico by bank of popular. Eighty-two he is a graduate of the state university of New York, university of south Maine and California state university at north ridge. So please join me in welcoming Manolo and we look forward to what you have to tell us today. Thank you.

>> Manolo: Good afternoon. Thank you very much for your presentation and I would like to start with a question. We are talking about accessibility inclusion and the Internet. And right now is the Internet accessible for person with disabilities? That's a very good question. I will give you my answer and perspective and I will divide that answer in two parts. First, this morning, the panelist has already talk a little bit about it and that there are standards, WCAG2.1 are guidelines that just do that, guide the process, enable the Web page completion and be accessible. That's important. We need standards. So we can assure that Webpage can be accessible. That's one part and the other part is usability. The user experience. You must need that person with disability navigate your Webpage. You must receive feedback for person with disability that use assisted technology. I will then do a very very short demonstration. I am using a Braille display. This is a technology that I

connected to my iPhone or through my computer and everything that is screen reader talks is presented in Braille. And the technology that I will demonstrate right now is my iPhone that also has a screen reader integrated and it is a voice over and I will give you a very short demonstration because what I want to do is relationship between the standards and the usability. So you can understand and maybe at the end I can answer that question that I make myself, it is accessible but not right now for person with disabilities. So to standards let's go to the first part. WCAG2.1, is right now the current standards are divided in four principles. The first principle is that all information must be perceptible and, for example, that's the most important -- one of the most important guidelines, the 1.1 to say that every imagine must have all text, text alternative. That's what the standard say. So that's an example. There's another guidelines over there in perceptible, the contrast of colors, you have a video you have to put closed captions. So that's an example of a guideline that you must follow. The second principle is make the information operable. For example, you have a form in your Webpage. So a person that use a keyboard like a blind person to access the Webpage does not use a mouse can follow very easy prepressing the top the order of that form. That's another example of make information operable. The third principle is understandable. We have to make our Web page base in some guidelines for example structure make using --

>> Here I go.

>> Heading that hierarchy so I can navigate it. I will show you an example that have all of these right now and four principles -- so if we comply with that person with assistive technology then can access that information. That the standards.

Let's then make a very short demonstration. So you can see that standard of a user perspective. So I will activate my screen reader of my phone.

Oh, let me do it slower, please. Give me just a sec.

(Spanish).

>> 35 -- 30 percent.

>> Okay, 30 percent I think that's slow that you can understand it. This voice also is very robotic voice that is my preference. Technology have very right now text to speech technology, but since I learned that technology so way back, I get used to its voice. So that's something that's a preference of a person. So I run a Webpage. I create just a Webpage so with this gude lines that I just say to you and we will explore, navigate very quick with my screen reader. I am now on some imagine and that imagine does not have

all text, the text alternative. So I want you to hear what happened with a blind person, a person use the screen here will find.

>> Image, image, image, image.

>> Do you hear what is said? Imagine. I don't have any idea. Just imagining if I am on a university end I said please select or choose our university programs and it says imagine link, imagine link, imagine link. And I have to start to guess to trying to find the information, but that's not accessible. And that's what the guideline, the WCAG, say you must describe with text all imagine because if not, what will happen, this is the user experience. And it is not fair that a person cannot access information, a blind person, a person that use assistive technology because the Webpage then it is not accessible. That will be a barrier created by the technology and the person that does not do that. So technology always promote inclusion, not segregation. So that's a very short example. I told you that with the forms it's very important every time you create a form that that's principle one. Principle two operable is quite important in a form to follow a reading order. Have so many times visit a form and it says I hit tab on my screen reader first name and I write my first name, Jose and I press up and say address two and I pressed up and say e-mail and I pressed up and said last name. Does not follow the guidelines. The reading order is very important because I have access forms that have, I don't know, 40 fields and there is no way that I can at the end make that information correct. And on top of that, when I find the button to submit, if that button does not have the text, I will just hear bottom, bottom, bottom. I have completed forms that have two bottoms at the end and it said my screen reader bottom and bottom one and bottom two and I started to guess again. And when I pressed, I say well my logic say that bottom one must be send and I press it. It says cancel. So there's another guessing because that Web page first does not follow the rules the guidelines and second does not pass by review with a person with disability. I have found bottoms that have an imagine and the person put the Alt text and when I found the bottom it said magnifier. And that button, what it really means is search. But the correct way to put this search button, not magnifier. But that's also important, the context when you describe the Alt text relationship. When we were talking about the principle, it is about understandable, our information must be understandable. Using headings. And I want to show you an example here that is very common. It is language. Internet is globally and person that create content, Webpage must specify the language of the Webpage and if our more than one language in one page must specify a tact, this is in English, Spanish, whatever language it is, I would make my last demonstration related to that topic so you can hear what happened when you find a Webpage that had more than one language and what happened with the screen reader.

I will put, for example, I will put the words in Spanish right now. I use a better quality voice and then I will go to -- okay, I will visit a Webpage that I have that is HTML so blind person can program in very accessible Webpage. So I will navigate this Webpage.

>> Inclusion code, download, link, documentation, link.

>> So this is the navigation bar and I said download, it is read in English. Hear now.

(Spanish).

>> Now there's the option for Spanish because the Webpage is correctly in the language. So if I could continue with that.

>> HTML mark down editor.

>> It read me the information in English. Let's go to a Spanish version.

>> (Spanish).

>> So the technology can then put automatically the language and correctly. If I use a Braille display all the time, what would happen if that tag language is not correct represented then the Braille it would be presented, the text in English and/or the text in the Spanish with the size in English. For example, upper in Braille and upper case letter in English have the dot six. In Spanish it's four, six and all the signs changing. So if I accent with a -- the language is not correctly represented that is not understandable to me so what would happen again? I have to start to guessing and that's not fair in this era that -- the best result that I can have access ago person with disability Webpage if they are guessing right and that's something that if you follow the guidelines and if you use a person with disability to do your Webpage then it's the best practice in being able that then we can define that that Web page is accessible. I will conclude now my presentation and later on I'll be more than happy to answer any of your questions.

>> Thank you Manolo. It's always interesting to hear and learn also from direct experiences as well as the wealth of experience you have teaching and working in this space. And, you know, many questions but I think we should move on to Greg and hear from him because I think your perspective is going to compliment very well what Manolo has been sharing with us and then we can open for a conversation with everybody. So tell you a little bit more about Greg's experience much he's a lawyer. Thirty-five plus years of experience in intellectual property technology and transactional law. He has practiced focuses on intellectual property and technology transactions, Internet law and policy, IP protection, and Web app accessibility under the Americans with Disabilities Act.

He advises clients on various Internet law matters, including ICANN and the new GTLD program, Internet governance, website development and content, the main name acquisitions, transfers, disputes and online pliers and enforcement of IP rights. He works with clients on resolving issues relating to accessibility for websites under the American with disabilities Act and has worked with clients, entertainment consumer goods, Internet, apparel, accessory fragrance, financial services, manufacturing and pharmaceutical and publishing industries. So wide range of different clients and experiences. Helping them work towards more inclusion online. He has also gone niche village, is a graduate of Columbia law school. So thank you very much Greg for being here with us and we look forward to learning from you.

>> Thank you.

I'm a lawyer and about 15 years ago one of my colleagues noticed that I did technology law and that I was involved with ICANN and Internet matters and said can you help me with this Web accessibility stuff. I have been doing bank ATM litigation over accessibility but now that the litigation field has moved to websites, I don't know anything about it and the rest is kind of history. At that time there wasn't much in the way of litigation. It was mostly compliance counseling. Since then things have changed a lot. This is an area many ways defined by litigation or the threat of litigation and it's -- but the litigation almost often -- almost always never actually occurs because the cases are settled very early, typically before any papers are filed by the defendant. So we got a little robot here.

In any case, it's a robot Glen from Canada. Just as long as it doesn't bring the wildfires with him.

In any case, the plaintiff's bar has gotten hold of this issue over the last several years. So a lot of litigation has been in a very high volume. In the last year alone in 2022 there were over 3,200 lawsuits filed involving web accessibility issues and of those over 2500 were filed in New York. Fortunately I practice in New York. No. 2 is Florida. California has been No. 3 for federal litigation but it's dropped down of a fourth and Pennsylvania is currently fourth. When I say fourth, it's fourth with like 20. The difference between New York and almost any other place is astronomical, you know, in part that's because the courts in New York have been more friendly to keeping plaintiff's lawsuits alive but typically these cases get settled very early for a fairly modest sum of money, very little of which is seen by the plaintiff. In most cases the plaintiff is an of the employer other than the other way around and they might get a thousand dollars out of ten or \$15,000. The rest goes to the lawyer. There are still of course litigation by disability advocates and disability or advocacy rights organizations and the plaintiffs you know in many cases are disability advocates they're not

merely plaintiffs for hire. One of the most prolific litigants is actually a woman who has filed -- or had filed for over 600 lawsuits. Almost all of which involve accessibility and the Web but not Web accessibility as we have been discussing it. Her cases are almost all against hotels and again what's called the reservation rule, what she looks for is whether the Web site has information about accessibility features of the hotel. And if it doesn't, she brings a lawsuit. Now, she may claim that she is interested in going to 600 different hotels. That might be stretching things a little bit. And indeed for the first time in 18 years, the supreme court will be hearing a case involving accessibility and it is involving a -- a case involving Debora Lawford who is a resident of Florida but will sue wherever she needs to. So she sued a hotel in Maine. Actually a little kind of bed and breakfast with three or four cottages called the coast valley-in, which actually it's not accessible, which, you know, is a different problem. But also did not have any information about whether or not it was accessible on its rather simplistic Web site. And the district court in Maine ruled that Lawford did not have standing to sue because she didn't have a realistic desire to go to the hotel. So she was essentially classified as -- what gets called tester. And she actually amended her complaint -- initially the complaint -- the answer that the -- was filed or there was a motion to dismiss filed saying well look she wasn't going to the hotel so she doesn't have standing because it doesn't seem say anything about her wanting to go to hotel so she filed an amended complaint that said I want to go to the hotel and the district court in Maine said you don't have standing go away. She appealed. The Court of Appeals -- or rather the circuit court said, no, we think you do have standing. The injury is in not having the information. And in essence it doesn't matter. That's obviously the simplifying long complex cases, you know, always going to say something that isn't quite right but then I'm telling it in a very, you know, gossipy sort of way. But the ultimate truth is essentially where I'm at. So that now -- that creates what's called a split in the circuit. There already was one but it created one more relatively high profile case which was enough to kind of create the interest, you know, on the supreme court. And the so now the first circuit which includes many, many other came out and said they believe that she has standing that is even -- that the issue of having a significant cognizable harm is sufficiently met here. So the supreme court has taken the case and the initial briefs are being filed, amicus briefs are being filed. It will be interesting to see. The ultimate result of this case will either be that there will be -- it will be even easier for plaintiffs to litigate -- bring litigations or it's going to be somewhat harder. And that you're going to have to demonstrate more of a real and good faith need to -- you know, to patronize the establishment.

So it will be very interesting to see. Even though this case only involves the reservation rule, it will redefine the whole landscape for, you know, regular Web accessibility cases about whether the Web site itself, you know, has the features that we have been discussing

here and meets the WCAG guidelines. Now, one of the interesting facts here is that the WCAG guidelines are not regulations, of course. They're issued by the worldwide Web consortium, W3C, and they're really kind of technical standards. They're not real -- they're not actionable developers tool kits either. So they're not great for developers. They're not great for lawyers but they're the only thing we really have. Obviously there is a lot of guidance for developers, not as much as there should be, but there's really nothing else that substitutes for this litigation involving private parties. Under the Rehabilitation Act the WCAG guidelines have essentially been adopted. Then that covers federal websites. But again, it's not perfect, it's not really regulatory language but it will have to do. And there's a reason why the -- why there is no regulation. The Web -- the Americans with Disabilities Act was -- came into being just before the worldwide Web really caught on. Some of you may remember a time before the worldwide Web really caught on and others of you may not but in any case, there were the regulations only really speak about brick and mortar establishments. And there were about 15 years of attempts to get a regulation set in place for the Web and tens of thousands of hours of work were expended. But the problem is the technology moves much faster than the regulatory process and they kept having to pull the regulations back and rewrite them and then the very last thing that happened under the end of the Obama administration, they pulled back a notice of proposed rule making and instead threw out a hundred questions of what we really should be doing. Then Trump came in and said I don't like regulations at all and killed the entire regulatory framework. Put it on his list. He loved creating this dead regulations list and he put, you know, Web accessibility right on it. So that's where it's stood for four years. The only thing that the Trump administration said was WCAG guidelines are not the law and what matters is functional accessibility. And that's -- and you can be flexible in how that's interpreted. That left people with even less guidance. And meanwhile, the Trump Department of Justice did absolutely nothing in terms of Web accessibility. Any type of enforcement, you know, was just essentially shut down.

Under the current administration, Department of Justice has woken up again. They are enforcing the ADA with regard to websites. The Department of Education has issued what's called a dear colleague letter, telling higher education institutions they need to get their act together. Of course, they have been told that in one way or another for the last 20 years but we live and hope and, you know, institutions do continue to improve, but it's a battle. It's always a battle. And then they've even started a new regulatory process, but this time they've started with the part of the ADA that deals with state and local governments, which is called Title two. What we've really all been discussing here without saying it is Title three, which is -- relates to public accommodations, which means places where the public is welcome. Title two deals with State and local governments and Title

one deals with places of employment and that's actually dealt with by the EEOC. So if you wonder why your Internet is not covered by Title three, it's actually covered by Title one and what does the EEOC do about ADA compliance and enforcement? As far as I know, absolutely nothing. Maybe that will change too. But as we've discussed and as you've heard repeatedly there's a lot of good reasons, there's moral and capitalistic and legal reasons. I think professor Cogburn gave the list of the reasons. And yet why are we falling down? Are we all morally bankrupt and legally Adavistic and capitalistically? No, none of the above. Maybe the moral bankruptcy, but in any case, a lot of the reason is that nobody knows who is supposed to care. Let's look at how a website is developed. Who gets involved. The marketing department, the -- an outside developer usually, legal might get involved. Obviously the business owners. The in-house IT staff. None of them are tasked with accessibility as a role. What you need to cut to the chase, and since you don't want to listen to me for three hours, you need an accessibility Czar, somebody inside for whom accessibility is their job. That if accessibility fails, they are a failure and they get fired. So they need to have skin in the game and they need to have the executive suite have their back. And they need to have access to the executive suite. So what you really need are -- I call it Czar and champions and C suite representatives all involved. Somebody has to get that started within a business in order for them to be inspired. And, you know, litigation that can be settled for ten or \$15,000 might not do that. Now, of course, the other part of the litigation is that you have to get your Web site compliant within a reasonable period of time. But there's a problem there too, unfortunately, that has arisen, which are accessibility widgets and overlays. Now, if you're a business and you have a Web site and you have been told that it needs to be remediated, you coulder you could probably figure the cost to reme 80 it rather than replace it but to make it fully compliant could be somewhere between 30 to 50 percent of what you spent on the Web site or even more. And you probably don't have any budget for that. Your maintenance budget probably 10 percent of that at best. Now what if somebody says for \$49 a month you can get an easy widget that you can just place on there a little button that looks like a little leerpd doe Davinci man symbol and you press it and volla, your it's compliant. And you don't have to talk to your lawyer, your in-house IT guy could probably put it on or even we'll come in and do it for you just like a vacuum cleaner salesman, we'll make it happen for you. And so a lot of businesses turn to that and then they get sued any way. Last years suites of 200 said they were directly because of accessibility widgets but even with the number 3200 Web site lawsuits that's still only a fraction of the fraction of websites out there just in the U.S. and imagine the rest of the world doesn't have a litigation crazy culture like we did. So solutions are going to come from different areas. So it's a bit of a mess. The disability community as I read it is generally very opposed to the widgets because they don't work.

They actually can interfere, particularly with screen readers and can actually complicate with these widgets and overlays and you may not know that the button is there. It may not be a place that's easily navigable and findable. It's created basically a distraction almost and I have to tell, you know, clients in a nice way you know, this is maybe better than nothing or maybe not but what we really need to do is get you a Web site that is accessible by design. Really should create a new Web site from the ground up, let's work on that. And also let's at a code level solve what I call the low hanging fruit on the Web site. And you need to get the team together all those people and now they all have to care about this and part of that is they need to understand, again, really the diversity, equity inclusion, the need accessibility is integral to that. Even if you're opposed to DEI which seems to be fashionable in certain political sessions these days, accessibility is -- it's good business and it can still -- you're including people who really need to be included and who don't -- they're not different from you.

And if your problem is you don't want democrats to be involved, well, that's not the problem. Don't make this about DEI -- if you do like DEI think about accessibility as a leg of DEI, but whatever it may be, it really is imperative.

>> (Away from microphone).

>> The mic off?

>> Maybe.

>> Thank you. Yes.

Any way, technology, friend or enemy.

Frenemy indeed, that's really a whole problem in this area, the Web is one of the great inventions of the last, you know, few decades and yet it's created all of these issues we're here talking about issues which are opportunities but they're mostly challenges. So I'll wrap up here and say really the concern is to get beyond litigation and to convince corporations, businesses that operate websites and developers, particularly front-end developers and I'll just say for a minute from the developers that I've talked to there are some that are really have bought into accessibility as a very important aspect but a lot of developers traditionally have not wanted to design accessible websites. They've avoided it on purpose. It limits their -- it cramps their style. If you like green and gold as a combination, there is no good combination of green and gold that will pass a contrast checker. That will have their proper ratio. I've tried it. It looked awful. You end up with very appeal yellow and a green that's almost black. So if you like green and gold or if your

school colors are green and gold, you know, you're going to have to do something different with the green and gold. Make it some stripes, deekive elements. Similarly what a lot of Manolo is referring to when it says imagine, imagine, imagine, it could be a photograph, picture or drawing but it could also be an imagine of text. That's a huge problem. If you like fancy looking fonts and stuff like that, a lot of times it's basically a picture of text. It's not ASCII, it's not any key. It's unreadable by a screen reader because it's just a picture of text. It could be a flower pot, you know, as far as a screen reader is concerned and yet you have this cool heading and all your cool headings that say all these cool things in these wonderful fonts with agreement lins coming out of the middle of the O and whatever it might be that's just imagine, imagine, imagine. So -- and the same thing with navigation. So that's why Web designers, particularly the ass stet tick ones don't like it. But you know what they got to grow up. And they need to be told -- they need to be brought on board. They should be advocating for this but they should also feel they will lose their job if they don't advocate for it. So we need to creator a greater culture of accessibility as a Sainai Quon none, as a given. And part of that is just acknowledging first off that some of us are become to an extent -- I've got two sets of glasses in my bag. I didn't even wear glasses or I didn't admit that I wore glasses until a few years ago so that's not going to get any better. But at the same time too it's if this this is a world we want to go one direction or the other I think we want to go in the dresks of being a better world and if if he we don't this is so essential. And part of this too is to use a word more figuoretively and literally, you need to see people with disabilities as visible and not ignore them, not look at them as a speed bump. They are us. They are my brother-in-law. They're the guy sitting to my left. They're the husband -- you no, the mother of a friend, whatever it is. You know, it's just a concern that needs to at a kind of base level human who are we any way. It really needs to. And I'm a little worried from the current climate in the U.S. that we don't -- that the culture of cruelty might, you know, interfere with this too. But in the end, you know, I think that because there are good reasons even for cruel people to be kind in this case, you know, in the right measure, that, you know, we need to move forward and, you know, find whatever reason works for people, but the end result really needs to be to get to the point where accessibility is taken for granted. And I'll be back in 50 years to discuss that.

[APPLAUSE]

>> Thank you. Just some very fascinating, you know, points of overlap and I think, again, this idea of understanding the experience and appreciating that and particularly what you've said about widgets and overlays and in my experience as well working with political parties and political campaigns, it's easier sometimes to have that entry point in terms of culture when it's a new organization and a new Web site. And it's very, very interesting to

see how that develops. That can become then an opportunity as an example for others who, you know, otherwise might be tempted to use the womens which to me also brings up this full sense of security from the point of view of the organization of thinking, oh, we've done what we needed to do. We are, you know, accessible between quotation marks so to speak. So, you know, I'd like to welcome any questions you may have. I certainly have some but I want to give those in the audience an opportunity first.

Please. Do we have microphones going around? And can you put your hands up again so I can see them? Yeah, okay. All right.

We'll start from wherever you want.

Well, let's start from over there. And then we'll come down here.

>> Thank you both or all three of you. This is really interesting to me since I have been -- hello?

>> It's on.

>> Okay. This is really -- first I said thank you. And I mean that. And this is interesting to me since I've been around since long before the Web. But I was wondering from a developer's perspective are there any classes or certifications because in high-tech certifications are, you know, the big thing. Yes, I have this certification that supposedly proves I can do something. But are there any certifications that say, okay, yes, gee has shown that he can develop websites that are acceptable. So I could take a developer and say okay, Joe developer I want to you go to this class, I want you to pass this test and you are going to be used?

>> I'll try and answer first. The answer is yes and no. There are some organizations that have put forward training programs. There are, you know, a number of resources out there, but there's no accepted standard. There's not like in the -- in the privacy area, there is one, you know, accepted standard, at least in the U.S., that, you know, if you're a CIPP, you know, that's the only standard you really need, CIPPUS, EU, whichever one it is. And that's kind of understood. But there's no winner yet and I don't know anybody's put forth something that's intending to be the winner. There's no kind of, you know, Microsoft certified version of a certification, as far as I know, that -- you know, and I'm not a developer. I don't even pretend to be one. But my understanding is that it's still an underdeveloped, so to speak, field.

>>

>> Manolo: I would like to add something. We have a challenge that a lot of the Webpage that are now created are created using CMS like Word press. Last time I revised almost 38 percent of Webpage from around the world, I created by Word press. That means that there's a lot of person that are creating Web page that are not developers. That does not have technical knowledge. And when you're creating with Word press, you cannot even have access to the code. If I tell you, well, you can do that and you can do this HTML code, so that's a challenge that we have also and that's something important to take in mind that a lot of person created web pages right now and does not have that technical ski.

>> Greg: Aisles also notice that Word press does have some templates but not all are accessible. So you have a choice to pick one that's accessible or not and you may not even know that's something you should be looking at is whether or not it's accessible. And there's also other companies like that, I see professor Cogburn in the back who I'd like to maybe let him cut the line and add a view here but I'll say there are other -- in addition to word press there is e-commerce engines like shopfy that they'll provide some advice on it. And they'll provide some tools but shopify's view is if you want to get anything more than basic you have to go to a partner which is a developer and some of the developers are friendly to accessibility and others aren't. So it's still a crapshoot out there with that.

>> Do you want to add something?

>> Sure, just to add. Thank you very much and great question and I think you're absolutely right in terms of a standard that everybody has agreed to but what I think within the industry, I mentioned earlier the international association of accessibility professionals, IAAP, and that came out of the disability community, the CSUN conference, the annual technology and disability conference, and it has become a very strong certification with about four or five different paths to go through from Web accessibility to document accessibility, the built environment and a couple of others. So if there's one place that I would recommend if you were thinking about where do you send this particular developer to prepare for and take a certification, that would be one potential path that's very well accepted now, nationally and around the world.

>> Thank you.

Let's come here to the front. And that goes back to the point you were taking Greg about having an accessibility Czar and somebody who may be responsible. And we'll --

>> Hi. First of all, my name is Julianna. First of all, I would I want to compliment for the panel. It is super important to have this kind of discussion. I just want to add a comment about things that I believe. I guess public sector and private sector in the civil society as

well as the civil sector need to capability of developer in some point of view. For example, disability people need to have the right of freedom of speech, for example, and the right to have access of information and to be citizen and to be a real citizen you need to have politician information and these kind of things that you can have a knowledge about the democracy and about your role as a person. So when you build a software or when you are like building a service or product, you need to have like the total user experience and have all kinds of people in our point of view. So I work with public policies in Brazil and I strongly believe if we have like kind of standards or frameworks, putting some of the responsibility of having some fundings of building possibility of the software developers, this kind of stuff would be important and, yes, this is my point.

>> Thank you. I don't know if you have any reactions to that.

>> Greg: I dwre.

>> And certainly I've seen it again working with certain organizations, particularly in the political space, leadership buy-in is really fundamental as you were saying earlier on, right, and that's really the way to make change happen. There is another recommendation I'm going to make but I want to keep that for the end.

Any other questions? I saw more hands up. Okay. Up there. Down here. Up here and then over there.

>> My name is Amed. I'm from Nepal. You talked about going beyond the litigation and convincing corporations, businesses to design accessible websites and will do that convincing, what has it take? Has it started? That's my first question. And about creating accessible websites, you know, like what's stopping these designers? Is it the cost factor? Are there expert designers to do it? Or don't they have the acumen to do it? And how do you balance aesthetic ticks and accessibility? I think both are very important. So yeah.

>> Greg: Well, first I think you can achieve both ass at the time sticks and accessibility you just need to be a little more thoughtful about it. Cost factor is part of it. You know, these are usually very tightly budgeted projects and even say 10 percent of it might cost to make a site accessible versus not, you know, can appear to weigh on a company. At the same time, I'm looking forward to the day when that trade-off sounds unthinkable. You know, it would be as unthinkable as, you know, excluding women from the vote in the United States. So it really shouldn't ab trade-off but it often is. And I think the develop -- I went into earlier the reasons why I think developers don't want to do it. I think there needs to be more organizations that are looking to work into corporations and, you know, find the right people, whether it's a DEI person or tech person or whoever it might be it to try to bring

them into the accessibility world. I'm not sure -- I mean, there probably are -- I'm sure there are other organizations that do it. I just don't see them having necessarily a lot of budget or profile to do it but I think as long as we bring it together you know hopefully there will be something in the future that will do that.

>> Thank you.

Question here in the front? We have many questions. Hands up there. Hands up over there.

>> hello, this is Vivik. Thank you to Jose, Greg, and moderator for amazing session. So my question is related to the accessible devices. So that was a really amazing display but are the devices really accessible in terms of cost to all the corners around the globe and since the technology is not very abundant, is it open source software or disguises or any attempt to be made? Because this is not a device that's being marketed in a larger scale so can a start-up in Nepal build from open source that's provided? That's my question thank you.

>> Thank you. Manolo.

>> I would like to address that question. And that's a challenge. My question can be let's see, have some controversy. So first the cost of creating this technology is high. So without any doubt the cost of technology is a barrier. Here in the United States there are some agencies, department, rehabilitation vocational, accommodation in the world that has assigned some money to buy that technology that it's really expensive. But on the other hand, as a developer, I can tell that you creating this technology is cost. And when you sometimes have a participant in a lot of projects in Latin America that we want to create technology at really low cost but that open source then you need that person -- the compromise and when open source a lot of people do it voluntarily. And they gave up after a certain of time and there's no way that you can have free technology with the latest integrated and doing in a voluntary way because that's not fair either for the user that maybe need an update but since the person that create it only have good in he think so its, open source if there is a community, a strong community that it is -- then can do it, I will tell you an example. BDA is a free screen reader but free you have to put in quotation marks. It is not that story that two blind programmers do it voluntarily. They receive a lot of money for Adobe gave money, Microsoft gave money, Amazon gave money annually. So they have -- can receive money to make this just great technology that as I tell you technology be able to create this technology you need flog have to implement it.

>> Greg: I would also say that Apple has been adding more accessibility features as they move on through the iterations and I just read about IOS17 which is coming later this year which I think is going to have some significant accessibility advances in it.

>> (Away from microphone).

>> Okay. Any way. Apple is adding stuff especially IOS17 looks like it will be a real advance for accessibility.

>> I think that's a great comment in terms of, you know, clearly affordability is key but also keeping pace with technology and technological advances. If you look at the early days, particularly of social media, for example, a lot of accessibility around those came through APIs and third party applications that were developed by some in the disability community themselves and then, you know, text knowledge companies start to be responsive to their needs and so on. And the need to have that embedded within technology development really is important because there might be all sorts of get around and, you know, different solutions but they are always going to be catching up first of all and then the trend that we're seeing with platforms in particular, the likes of Twitter, but we could name others as well, closing off their environments to APIs and third party applications really is going to be a problem for certain parts in particular in the disability community not knowing what the development of that technology going forward is going to be. And so it really, you know, it's really a cultural business issue that needs to be addressed within the business sector first and foremost.

>> Greg: Twitter also fired their entire accessibility team but that's a different story.

>> We have a question over there and then we'll go to the back.

>> Thank you very much for this presentation. It's really woken me up to quite a lot of factors that I don't always pay a lot of attention to. And I'm really grateful for this. And I think that many like Web site developers or folks often focus really quickly on minimum viable products to get very quickly out the door. And I don't know that that this is something that there's a great prioritization given to. I heard some wisdom from the other side of the room earlier about the commercial benefits maybe as I attractors to ganggle some jewelry in front of the people who prioritize projects that might help this but my question was professor Cogburn might be intimidated by the speed those listen to audio. You slowed it down to about 45 percent for the benefit of us in the audience but what is the typical speed to which you are listening to the vocals.

>> Manolo: Well, the speed of speech visualizer, it is the words per minute that the person can say and right now 145 percent it could be about 100 words per minute. I use that typically 350 words per minute and the important thing is not that it's -- the important thing is that you can understand it much that's the important thing. It is not that it's more fast or more, for example, I understand it and if somebody send me an e-mail I can read it in 40 seconds but if I put it more slow I will have two or three minutes to read it and that affect my productivity. For me that's something that is flexible and is individual and must be individualized to feel the needs of each person.

>> Greg: New Yorkers speak 350 words per minute so I don't see what what's the problem.

[LAUGHTER]

>> Maybe we need one of those customized dials. The question there in the back for New Yorkers too.

>> So some of you know me. My name is David. David macky. Not sure everyone knows my background. My background is I'm a developer. So I wanted to possibly bring a perspective which is -- which can be hard to describe if you're not a developer. And I don't want to be speaking on behalf of all developers but I am a developer with a person in the past who has not had disabilities. And if I can bring that voice to this conversation, I hope I add something to the conversation. We've touched on a number of things both with this conversation and previous conversation and the conversations from this morning which are relevant from my perspective as a developer over many decades. It's not easy -- there's -- if you don't have access to that discipline, it's possible that you may not appreciate the difficulties required to maintain knowledge in that space, keep up to date with what's going on, and continue to develop what I would consider learning new languages within the development space itself. So it does present a challenge as a quote/unquote developer to produce software that's valuable to a wide range of people and I wanted to highlight what was said so the of it's setly -- or sort of indirectly which really does Boyle down to the costs associated to maintain the knowledge required to create tools that reach a broad range of people. So I do believe the development community and again this is -- I'm reemphasizing what was said with this panel, I do think the development community benefits with conversations like this where you can -- when you're outside the development community, if you can highlight what are the guidelines and focus our attention on what are the things that we need to do for you as an end user and which particular end user. So I didn't have a question but I did want to speak from that perspective. Hopefully that adds value to the conversation.

>> Thank you so much. And, you know, I know we are at time and I'm -- I appreciate all the questions and contributions but I'll just say to that point, yes, again in the political space where I work, what I've seen, it's been collaboration between developer and in particular blind owned and operated user testing organizations but there needs to be the willingness from the client to make all of that work. So I'll just close by saying one thing because we've talked a lot about changing culture and I think there is a big role for that to play at the small level, every day level. I'll just give you an example. Every week I put together and send out a newsletter about what my wonderful colleagues in the school of communication do here. And it's great to get pictures with that sometime. But six months ago we need to do this differently because people were just sending me pictures. We changed the platform. Now we have more functionalities to make it more accessible. Not just sending an e-mail anymore. I said if you want a picture to go together with this, here are some resources to write an Alt text description for it and everybody was a little bit freaked out by it and it's like what is this? How does it work? How is it different than a caption? And I said I'll help you. Doarcht worry. But started getting requests like can you just write it for me, you're clearly better than me. No, no, we're not going to learn anything here. You take a first go at it, then I'll help you. Then it's fine. I don't mind correcting giving you tapes whatever and that's what we're doing now and very quickly people became better at it and they started doing and now whatever the organization they might be involved in suddenly they have this experience and bring that up if they're doing things different on their Web site and communications and so on. Sometimes this little small changes that's where it all needs to start. Not going to say it's going to be solving all problems but certainly going to bring this point to the table and maybe it wasn't there before. Greg and Manolo --

>> Greg: I'll just say I think that's a perfect lesson that the culture is you and the change is you. Each and every one of you can do what Fillipo did and take a little step with what they do to make a changes to promote awareness and accessibility.

>> Manolo: I just want to say to all of you you have a new friend. If you need I can check out your Webpage and I will make recommendation. More than happy to do that.

>> Thank you so much. Let's give them a final round of applause.

[APPLAUSE]